Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Respiratory Care Technology Examination – 24-Aug-2020

Time: Three Hours | Max. Marks: 100 Marks

Clinical care respiratory care technology Paper - I (RS2)

Q.P. CODE: 2929

Your answers should be specific to the questions asked

Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Answer any Two) 2 x 10 = 20 Marks

1. Chest physiotherapy-indications, contraindications, goals, procedure, side effects patient teaching and assessment of outcome.
2. Treatment of pulmonary tuberculosis.
3. ARDS.

SHORT ESSAYS (Answer any Ten) 10 x 5 = 50 Marks

4. Treatment of anaphylactic shock.
5. Meconium aspiration syndrome.
6. Bronchopulmonary dysplasia.
7. Diagnosis and management of bronchiolitis.
8. What is normal breath sound? Describe adventitious breath sounds, their causes mechanism and characteristics.
9. Complete hemogram and normal ranges.
10. Serum electrolytes-normal range and clinical significance.
11. Current guidelines of advanced cardiac life support.
12. Procedure for arterial sampling.
13. AARC clinical practice guidelines for ABG.
14. AARC clinical practice guidelines for capillary blood sampling in pediatrics.
15. Pathogenic mechanisms responsible for the development of pneumonia.

SHORT ANSWERS (Answer any Ten) 10 x 3 = 30 Marks

16. Risk factors for mortality in community acquired pneumonias.
17. Causes of chronic cough.
18. Levels of consciousness.
19. Pulse rate.
20. Blood pressure examination.
21. Abnormalities of thoracic cage.
22. Basic procedure for blood gas analysis.
23. Indications for ABG analysis.
24. Mainstream versus side stream $ETCO_2$ monitoring.
25. Normal and abnormal $ETCO_2$ graph.
26. Radiological findings in community acquired pneumonias.
27. Pathogrnic specific treatment for community acquired pneumonias.

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B. Sc. Respiratory Care Technology Degree Examination – 26-Aug-2020

Time: Three Hours | Max. Marks:100 Marks

APPLIED RESPIRATORY CARE TECHNOLOGY -II (RS2)

Q.P. CODE: 2930

Your answers should be specific to the questions asked.
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Answer any two) 2 x 10 = 20 Marks

1. Discuss different modes of mechanical ventilation.
2. Discuss arterial blood gas analysis. Management of acidosis and alkalosis.
3. Discuss stratergies to improve ventilation and oxygenation and care of endotracheal and tracheostomy tubes.

SHORT ESSAYS (Answer any ten) 10 x 5 = 50 Marks

4. Blood pressure monitoring and arterial wave form.
5. Pressure support ventilation.
6. Briefly classify ventilation.
7. Pulmonary artery pressure monitoring.
8. Extubation criteria.
9. Complication of mechanical ventilation.
10. Tracheostomy.
11. Fluid management and nutrition in a ventilated patient.
12. Indications for mechanical ventilation.
13. Ventilator failure types and treatment.
14. Postural drainage.
15. $Etco_2$ monitoring.

SHORT ANSWERS (Answer any ten) 10 x 3 = 30 Marks

16. Permissive hypercapnea.
17. PEEP.
18. Lung compliance.
19. Chest inspection during mechanical ventilation.
20. Pressure volume loop in mechanical ventilation.
21. Pulse oxymetry.
22. Ventilator alarm settings.
23. Nitric oxide.
24. Rapid shallow breathing index.
25. Propofol.
26. Types of hypoxia.
27. Laryngeal mask airway.

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Respiratory Care Technology Degree Examination – 28.08.2020

Time: Three Hours Max. Marks: 100 Marks

Advanced Respiratory Care Technology - III (RS2)

Q.P. CODE: 2931

Your answers should be specific to the questions asked

Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Answer any Two) 2 x 10 = 20 Marks

1. AARC practice guidelines for endotracheal suctioning, bronchodilators and medications with nebulizers and assisting for bronchoscopy.
2. Causes of respiratory failure and indications for mechanical ventilation.
3. Discuss about NIV including indications and contraindications for NIV, indications for changing from NIV to IPPV.

SHORT ESSAYS (Answer any Ten) 10 x 5 = 50 Marks

4. What are the two common patient triggering variables?
5. What is the effect of activating pressure alarm? What are the control variables phase and types of breath in a ventilator?
6. Write normal values for vital capacity, MIP, tidal volume, PEFR and FEV1.
7. Arterial oxygen content.
8. Treatment of hypoxia.
9. Ventilation in a chest injury patient.
10. Initial ventilator setting for volume control ventilation.
11. Calculation of ideal body weight.
12. Auto PEEP.
13. Contraindications for HME filter.
14. What are different levels of alarm and examples of events during mechanical ventilation?
15. Guidelines for ventilation in COPD patient.

SHORT ANSWERS (Answer any Ten) 10 x 3 = 30 Marks

16. Indication for mechanical ventilation in acute severe asthma.
17. Glasgow coma score.
18. Diagnostic criteria for ARDS.
19. Causes for acute pulmonary edema.
20. Ventilator check list documentation of patient ventilator system.
21. Minimum leak and minimum occlusion technique for cuff inflation.
22. Describe PIP, plateau pressure and transpulmonary pressure draw and label normal components of the capnogram.
23. Conditions causing increased airway resistance and decreased compliance.
24. West's zones of the lung.
25. Permissive hypercapnea.
26. Indications for using close suction catheter system.
27. Incentive Spirometry.

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Respiratory Care Technology Examination – 10-Dec-2020

Time: Three Hours | Max. Marks: 100 Marks

Clinical care respiratory care technology Paper - I (RS2)

Q.P. CODE: 2929

Your answers should be specific to the questions asked

Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Answer any Two) 2 x 10 = 20 Marks

1. Acute respiratory failure.
2. Role of respiratory therapist in the management of ECMO. Discuss ARDS.
3. Techniques and devices used for airway clearance therapy.

SHORT ESSAYS (Answer any Ten) 10 x 5 = 50 Marks

4. Strategies for prevention of nosocomial pneumonias.
5. Physiologic alterations during bronchoscopy and role of the respiratory therapist.
6. Physical signs of malnutrition and conditions causing high risk of malnutrition.
7. Management of bronchopleural fistula.
8. Cystic fibrosis.
9. Endotracheal suctioning.
10. Clinical signs of hypoxia.
11. Exercise testing in the assessment of respiratory diseases.
12. Sleep apnea assessment.
13. Metabolic acidosis, anion gap and Stewart principle.
14. Ventilator bundles.
15. Predictors of mortality in acute exacerebation of COPD.

SHORT ANSWERS (Answer any Ten) 10 x 3 = 30 Marks

16. Lung recruitment.
17. Advanced cardiovascular support in refractory shock.
18. Hyperbaric O_2 therapy.
19. Indications for nitric oxide therapy.
20. Causes and types of atelectasis.
21. Incentive spirometry.
22. Protocol for lung expansion therapy.
23. Causes of impaired mucociliary clearance in ventilator patient.
24. Indications for fibreoptic bronchoscopy.
25. Contraindications for chest physiotherapy.
26. Complications of postural drainage therapy.
27. Contraindications and complications of directed cough.

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B. Sc. Respiratory Care Technology Degree Examination – 14-Dec-2020

Time: Three Hours Max. Marks:100 Marks

Applied Respiratory Care Technology -II (RS2)

Q.P. CODE: 2930

Your answers should be specific to the questions asked.
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Answer any two) 2 x 10 = 20 Marks

1. Define weaning, its criteria and weaning failure.
2. Aerosol therapy
3. Define mechanical ventilation-its operational modes and complications.

SHORT ESSAYS (Answer any ten) 10 x 5 = 50 Marks

4. PEEP
5. Hypoxia-classification and its therapy
6. Oxygen delivery equipments
7. OSA
8. Disease condition caused during mechanical ventilation
9. Explain sterile suction procedure.
10. Ventilator waveforms
11. PRVC mode
12. Pneumothorax-evaluation and management
13. Complications related to endotracheal intubation
14. Inhaler devices and techniques
15. $ETCO_2$ indication and its significance

SHORT ANSWERS (Answer any ten) 10 x 3 = 30 Marks

16. Surfactant replacement therapy
17. Pulmonary rehabilitation
18. Bi-PAP
19. Postural drainage
20. Steroids
21. Lung compliance and airway resistance
22. Cardiac arrhythmias
23. GCS
24. ABG-normal parameters of electrolytes
25. Flow meters
26. Oxygen concentrator
27. Mini tracheostomy

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Respiratory Care Technology Degree Examination - 16-Dec-2020

Time: Three Hours | Max. Marks: 100 Marks

Advanced Respiratory Care Technology - III (RS2)

Q.P. CODE: 2931

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Answer any Two) — 2 x 10 = 20 Marks

1. Respiratory failure
2. ARDS-causes, clinical features and its management
3. Discuss about weaning from mechanical ventilation.

SHORT ESSAYS (Answer any Ten) — 10 x 5 = 50 Marks

4. ECMO
5. Methods of transport during mechanical ventilation
6. Pulse oximetry
7. Guillain barre syndrome
8. Hyperkalemia
9. Indications and contraindications of PFT
10. Pulmonary edema
11. Indications of oxygen therapy
12. Methods of chest physiotherapy
13. Bi PAP
14. Respiratory acidosis and respiratory alkalosis
15. Extubation criteria

SHORT ANSWERS (Answer any Ten) — 10 x 3 = 30 Marks

16. Nutritional requirement for ventilated patients
17. Nasopharyngeal airway
18. Deep breathing exercises
19. VAP bundle in icu
20. NRBM
21. High flow oxygen devices
22. Vital signs
23. Weaning failure
24. Nasal intubation
25. Airway suctioning
26. Plateau pressure
27. Boyle's law